Schleiden, Dutrochet, Meyer, Decaisne, Von Martius, Lindenberg, Dassen, Morren, Göppert, Mohl, Martens, Berzelius, Fritzsch, and numerous other botanists of celebrity. As, however, the insertion of the whole report will be impossible, we shall endeavour to give some extracts from it, especially those referring to papers by naturalists of this country. The entire report consists of nearly 200 octavo closely printed pages, and is, we learn, to be had separately.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

February 13th, 1838.—William Yarrell, Esq., in the Chair.

Mr. Waterhouse exhibited a new species of Squirrel from the Society's Museum, and characterized it as:

SCIURUS SUBLINEATUS. *Sc. suprà fusco-olivaceus flavescente lavatus; lineis dorsalibus quatuor nigris tribus albescentibus, a humeris ad uropygium excurrentibus: abdomine flavescente: caudâ nigro flavoque annulatâ.*

	unc.	lin.
Longitudo *corporis* ab apice rostri ad caudæ basin..	6	0
——— ab apice rostri ad auris basin.....	1	2½
——— *caudæ* (pilis inclusis)	0	5
——— *tarsi digitorum*que	1	2¼
——— *auris*	0	2½

Habitat ——— ?

"This animal is less than the Palm Squirrel (*Sciurus palmarum*, Auct.), but like that species has four dark and three pale lines on the back: these lines, however, are very narrow, and occupy only the central portion of the back; they are not continued on to the shoulders, neither do they extend over the haunches. The general colour is olive-brown, a tint arising from the hairs being each minutely annulated with deep yellow and black. The throat, chest, and rump, are whitish, and the belly is yellow. The hairs covering the feet above are annulated like those of the body, but of a deeper tint. The tail is cylindrical and rather slender, and exhibits obscure annulations, each hair being annulated with deep golden yellow and black. The fur is short and soft, that on the back is grey at the base; on the under parts the hairs are very obscurely tinted with grey at the base. The hairs of the moustaches are numerous, moderately long, rather slender, and of a black colour. The head

is very nearly uniform in colour with the body; it is however less yellow."

Mr. Blyth called the attention of the Society to a peculiarity in the structure of the feet in the *Trogonidæ*, which he thought had not been previously noticed. This family, although *zygodactylous*, have the toes disposed on quite a different principle from the Woodpeckers, Parrots, and other birds, which present an analogous structure; their first and second toes being opposed to the third and fourth, in lieu of the first and fourth to the second and third, in consequence of which, that toe, which corresponds to the middle one in birds that are not yoke-footed, that is to say, the third or longest toe, is the inward of the two forward toes in the *Trogon* family, and the outward in the Woodpeckers and Parrots.

A continuation of Mr. Owen's paper, on the Anatomy of the Giraffe was then read, embracing the principal features of interest in the osteological peculiarities of this animal. The abstract will be found in No. 62 of the Proceedings, from which the following are extracts.

The author, in the first place, details the result of his investigation into the evidence bearing upon the supposition of there being in the male Nubian Giraffe a third horn, situated anteriorly in the mesial line of the *cranium*.

Upon making a section of the skull of the male Cape Giraffe, the anterior protuberance was shown to be due only to a thickening and elevation of the anterior extremities of the frontal, and the contiguous extremities of the nasal, bones; and in the Nubian Giraffe the existence of a third distinct bony *nucleus* was also satisfactorily negatived; for, upon macerating the skulls of individuals which had not attained the adult age, the posterior horns became detached from the bones of the *cranium*; but no such separation took place in respect to the protuberances forming the supposed third horn, which would have been the case had its relation to the *cranium* been that of a distinct *epiphysis*.

In both the Cape and Nubian Giraffe, the horns were placed immediately over the coronal suture, which traversed the centre of their expanded bases. The frontal bones were distinct and joined by a well-marked suture, continued along the posterior two-thirds of the frontal protuberance, or as far as the nasal bones. The sagittal suture was persistent on both sides external to the horns. The parietal bone was single and anchylosed with the occipital and interparietal bones.

The male Giraffe, in both the Cape and Nubian varieties, has the

horns nearly twice as large as those of the female; the expanded bases of the horns also in the former, meet in the middle line of the skull, but in the female the bases of the horns are at least two inches apart.

The nasal bone was bifurcate at its anterior extremity as in the Deer, not simply pointed as in most of the Antelopes.

With respect to the cervical *vertebræ* of the Giraffe, Mr. Owen observes, that they are not only remarkable for their great length, but also, as has been recently shown by Dr. Blainville, for the ball and socket form of the articulations of their bodies; the convexity being on the anterior extremity, and the concavity posteriorly, agreeing in this particular with the *vertebræ* of the Camel.

Processes, analogous to the inferior transverse processes in the Crocodile, extended downwards and outwards from the lower part of the anterior extremity of each of the cervical *vertebræ* (except the *atlas* and *dentata*), but of much smaller size than the corresponding processes in the Camel.

The perforations for the vertebral arteries were large, and present in the seventh as well as in the rest of the cervical *vertebræ*; they were situated above the transverse processes in the side of the bodies of the *vertebræ* at the base of the superior *laminæ*. Mr. Owen observes, that although this position of the arterial *foramina* is somewhat peculiar, yet, in this respect, the Giraffe comes nearer the horned Ruminants than the long-necked *Camelidæ*.

In viewing the vertebral column of the Giraffe from above, the cervical *vertebræ* are seen to present the broadest bodies; of these the third and fourth are the narrowest and longest, the rest gradually increasing in breadth and diminishing in length to the seventh: the dorsal *vertebræ* thence grow narrower to the ninth, after which the *vertebræ* increase in breadth chiefly by the progressive development of the transverse processes.

Mr. Owen remarks, in conclusion, that the order *Ruminantia*, perhaps the most natural in the mammiferous class, if we look to the condition of the organs of nutrition, presents, however, more variety than any of the carnivorous orders, in the local development of the organs of relation, and the consequent modification of external form: the most remarkable of these modifications is undoubtedly that which we admire in the Giraffe, and the anatomical peculiarities, which its internal organization presents, are principally confined to the skeleton in respect to the proportions of its different parts; and to those parts of the muscular and nervous systems immediately relating to the local peculiarities in the development of the osseous framework.

February 28, 1838.—Richard Owen, Esq., in the Chair.

Some observations were made by M. Bibron upon two European species of *Triton* indigenous to this country, *Triton cristatus* and *Trit. marmoratus*, which many naturalists consider to have been erroneously separated. M. Bibron, however, entertains no doubt whatever of their being really distinct, and pointed out a character by which he states they may readily be distinguished, and which he believed to have been hitherto unnoticed. This distinction consists in the form of the upper lip, which in *Triton cristatus* is so largely developed as to overlap the under lip posteriorly when the jaws are closed, a condition never present in *Trit. marmoratus*.

Mr. Ogilby exhibited and characterized, under the name of *Macropus rufiventer*, a new species of Kangaroo which Mr. Gould had received from Tasmania, where it is known by the name of Wallabee*.

Mr. Waterhouse exhibited a drawing, and the tail and jaws of a new species of *Delphinus*, which he characterized as

Delphinus Fitzroyi. *Delph. suprà niger; capitis corporisque lateribus, corporeque subtùs, niveis; caudâ, pedibus, labioque inferiore, nigris; fasciis latis duabus per latus utrumque obliquè excurrentibus, hujusque coloris fasciâ utrinque angulo oris ad pedem tendente.*

	ft.	in.	lin.
Total length (measuring along curve of back)	5	4	0
Length from tip of muzzle to vent	3	10	9
Length from tip of muzzle to dorsal fin	2	6	5
Length from tip of muzzle to pectoral	1	4	5
Length from tip of muzzle to eye	0	9	9
Length from tip of muzzle to breathing aperture (following curve of head)	0	10	7
Length from tip of muzzle to angle of mouth	0	7	9
Length of dorsal fin (along the anterior margin)	1	0	5
Height of ditto	0	6	4
Length of pectoral, (along anterior margin)	1	2	8
Width of tail	1	4	5
Girth of body before dorsal fin	3	0	6
Girth of body before pectoral fin	2	8	2
Girth of body before tail fin	0	7	8
Girth of head over the eyes	2	0	0

Habitat, Coast of Patagonia, lat. 42° 30′. (April).

"This species, which I have taken the liberty of naming after Captain Fitzroy, the Commander of the Beagle, approaches, in some respects, to the *Delphinus superciliosus* of the 'Voyage de la Coquille,' but that animal does not possess the oblique dark-gray bands

* Described by Mr. Ogilby in the Annals of Natural History, vol. i. p. 320.

on the sides of the body; it likewise wants the gray mark which extends from the angle of the mouth to the pectoral fins. In the figure, the under lip of the *Delph. superciliosus* is represented as almost white, whereas in the present species it is black: judging from the figures, there is likewise considerable difference in the form. The figure which illustrates this description agrees with the dimensions, which were carefully taken by Mr. Darwin immediately after the animal was captured, and hence is correct."

Mr. Gould exhibited two species of the genus *Ptilotis*, which he characterized as *Ptil. ornata*, and *Ptil. flavigula*.

PTILOTIS ORNATA. *Ptil. vertice, alarum marginibus externis, necnon caudæ olivaceis; dorso uropygioque brunneis; gulâ, genisque olivaceo-fuscis; pectore corporeque subtùs cinerescentibus, singulis plumis notâ latâ brunneâ in medio ornatis; crisso pallidè badio plumis fusco striatis, penicillâ nitidè flavâ utrumque colli latus ornante; notâ longitudinali sub oculos olivaceâ; primariis rectricibusque caudæ fuscis, his ad apicem externum albis; rostro nigrescente; pedibus brunneis.*

Long. tot. $6\frac{1}{2}$ unc.; *rostri*, $\frac{3}{4}$; *alæ*, $3\frac{5}{8}$; *caudæ*, $3\frac{1}{8}$; *tarsi*, $\frac{7}{4}$.

Hab. Swan River, Australia.

PTILOTIS FLAVIGULA. *Ptil. capite, nuchâ, genis, corporeque inferiore nigro-griseis, hoc colore apud abdomen crissumque olivaceo tincto; plumis auricularibus argenteo-cinereis et post has guttâ flavâ; gulâ flavâ; alis, dorso, caudâque, flavescenti-olivaceis; femoribus olivaceis; rostro pedibusque nigrescentibus.*

Long. tot. 8 unc.; *rostri*, 1; *alæ*, $4\frac{1}{4}$; *caudæ*, $4\frac{1}{4}$; *tarsi*, 1.

Hab. Van Diemen's Land and New South Wales.

March 13th, 1838.—William Yarrell, Esq., in the Chair.

Mr. Ogilby read a letter from M. V. der Hoeven, in which the writer expresses his belief that the large Salamander preserved in a living state at Leyden ought to be regarded as a species of Harlan's genus *Menopoma*; its specific characters consisting in the absence of the branchial apertures, which are present in the species upon which Harlan founded his genus. M. V. der Hoeven thinks it probable that the branchial apertures were present in the Leyden Salamander in the young state, and he proposes to adopt the generic term *Cryptobranchus* in preference to that of *Menopoma*, and to give it the specific name of *Japonicus*. He further states that his observations upon this singular reptile will shortly be published in a Dutch Journal.

Mr. Owen observed, with reference to the opinion of M. V. der Hoeven respecting the relations of the Gigantic Salamander of Japan to the *Menopoma* of the Alleghany Mountains, that the persist-

ence of branchial apertures was a structure so likely to influence not only the habits of an amphibious reptile, but also the structural modifications of the osseous and vascular parts of the respiratory organs, as to render it highly improbable that the *Menopoma* should be related generically to a species having no trace of those apertures. He thought, therefore, that the question of the *Menopoma* and gigantic Japanese Salamander being different species of the same genus, could be entertained only on the supposition, that the branchial apertures were a transitional structure in the former reptile as they are in the latter. That this was the case he considered as highly improbable; for, besides the ossified state of the hyoid apparatus, there was evidence in the Hunterian Collection that both the male and female generative organs in the *Menopoma* have arrived at maturity without any change having taken place in the condition of the branchial apparatus usually considered as characteristic of the *Menopoma*. He therefore considered it to be undoubtedly generically distinct from the gigantic Salamander of Japan, the true affinities of which could only be determined satisfactorily after a complete anatomical investigation, especially of its sanguiferous, respiratory, and osseous systems.

Mr. Ogilby exhibited a drawing, made by Major Mitchell, of a Marsupial animal found by that officer on the banks of the river Murray, during his late journey in the interior of New South Wales. Mr. Ogilby stated his original belief that the animal in question belonged to the *Perameles*, under which impression he had proposed to name it *Per. ecaudatus*, from its entire want of tail, a character found in no other species of the same group; but a drawing of the fore-foot, afterwards found by Major Mitchell, and likewise exhibited to the Society on the present occasion, had considerably shaken this first opinion, and induced Mr. Ogilby to suspect that the animal may eventually form the type of a new genus. According to Major Mitchell's drawing, and the notes which he took at the time of examining the specimen, it would appear that there were only two toes on the fore-feet, which were described as having been so perfectly similar to those of a pig, as to have procured for the animal the name of the pig-footed bandicoot, among the persons of the expedition.

The drawing of the foot, in fact, very closely resembles that of the genus *Sus* in form and characters; two toes only are represented, short, and of equal length; but there is a swelling at the base of the first *phalanges*, which renders it probable that there may be two smaller ones behind. The *Perameles*, on the contrary, have three

middle toes on the fore feet, all of equal length, and armed with very long, powerful claws, besides a small rudimentary toe very distinctly marked on each side. The form and character of the hind feet were perfectly similar to those of the *Perameles*; as were also the teeth, as far as could be judged from the drawing, except that the canines did not appear to surpass the anterior molars in point of size. The ears were long, elliptical, and nearly naked; the head broad between the ears, and very much attenuated towards the muzzle; the body about the size of a small rabbit, and the fur very much of the same quality and colour as in that animal. Mr. Ogilby, after expressing his confidence in the fidelity of Major Mitchell's drawings, and the care with which that gentleman assured him he had made the observation in question, expressed his belief that this animal would be found to constitute a new genus of Marsupials, and proposed for it the provisional name of *Chæropus*, in allusion to the described characters of the fore feet.

The following is the notice of this animal inserted by Major Mitchell in his journal, on the occasion of first discovering it. "June 16, 1836. The most remarkable incident of this day's journey was the discovery of an animal of which I had seen only a head in a fossil state in the limestone caves of Wellington Valley, where, from its very singular form, I supposed it to belong to some extinct species. The chief peculiarity then observed was the broad head and very long, slender snout, which resembled the narrow neck of a wide bottle; but in the living animal the absence of a tail was still more remarkable. The feet, and especially the fore legs, were also singularly formed, the latter resembling those of a Pig; and the marsupial opening was downwards, and not upwards, as in the Kangaroo and others of that class of animals. This quadruped was discovered by the natives on the ground; but on being chased it took refuge in a hollow tree, from which they took it alive, all of them declaring that they had never before seen an animal of the kind. This was where the party had commenced the journey up the left bank of the Murray, immediately after crossing that river." Such, Mr. Ogilby remarked, was all the information he possessed at present with regard to this singular animal; but Mr. Gould had promised to examine the original specimen on his arrival at Sydney, in the Museum of which town it had been deposited; and Mr. Ogilby therefore hoped that, through the kindness of that gentleman, he should shortly have it in his power to communicate a more detailed description of its form and characters to the Society.

Mr. Waterhouse afterwards called the attention of the Meeting

to some valuable skins of *Mammalia*, brought from Africa by Capt. Alexander, recently purchased for the Society's Museum.

BOTANICAL SOCIETY OF LONDON.

July 6.—J. E. Gray, Esq., F.R.S., President, in the Chair.

A paper was read by the Secretary communicated by Robert H. Schomburgk, on the *Bertholletia excelsa*, accompanied with drawings of the plant in different stages of its growth. Mr. Gray noticed a peculiarity in the seed vessel, which led to some discussion, after which the Meeting adjourned.

August 3rd.—J. E. Gray, Esq., F.R.S., President, in the Chair.

Specimens of *Polypogon monspeliensis*, *Poa distans*, and *P. procumbens*, *Setaria viridis*, &c. were exhibited by Dr. Bossey, collected near Woolwich.—Mr. Anderson also exhibited numerous living specimens of *Utricularia vulgaris* and *Myriophyllum verticillatum*, obtained from the old locality in the ditch around Kew Gardens, which were distributed. The Secretary announced a Donation of British Plants from Dr. T. B. Salter, of Poole, Dorsetshire.

A paper was then read by the Curator Daniel Cooper, A.L.S., being some notes on a large variety of *Ranunculus Flammula*, which he had found near Reigate, and which approached near to *R. Lingua* as regards its habit; the size of the flower however being a sufficient character to consider it as the former species, although the whole character of the herbage resembled much the latter species; the stem varying from 10 to 19 inches in height, and the leaves of considerable size. Mr. C. also observed that the variety of *R. Flammula*, β. *reptans*, Lightfoot, was exceedingly plentiful on Hampstead and other heaths near London. Mr. Cooper then read the details of the first excursion made by the Members and President of the Society this summer to Woking Common, Surrey, with observations on varieties of the plants then found. He observed that this spot was selected on account of the easy access by the London and Southampton railway. After describing the details of the excursion, it was observed that *Lycopodium Selago* had not been before found so near the metropolis. A variety of *Calluna vulgaris* was also noticed by Mr. Cooper, which appeared to be the *Calluna vulgaris hirsuta*, of Gerard, 1830, and which he considered deserving a place in the recent Floras of Britain, the degree of hairiness forming a sufficient character to warrant its insertion. It is noticed by all the older botanists. A white variety of *Ajuga reptans* was also noticed, together with a very beautiful fawn-coloured variety of *Orchis Morio*, one specimen of which